

Amendments to the Specification:

Please amend the specification as shown:

Please delete paragraph [0022] on page 6, and replace it with the following paragraph:

[0001] The present invention also contemplates a phosphospecific antibody that is raised against a peptide of PAK4 that comprises a phosphorylated serine at position 474 of the PAK4 protein sequence. In one embodiment, the PAK4 peptide comprises the amino acid sequence, KEVPRRKSLVGTPYWMAPE (**SEQ ID NO: 5**), which comprises a phosphorylated serine.

Please delete paragraph [0030] on page 8, and replace it with the following paragraph:

[0002] Similarly, in a preferred embodiment of methods of the present invention, the level of phosphorylated PAK is determined by using a phosphospecific antibody specific to the phosphorylated serine of PAK4. In one embodiment, the phosphospecific antibody is raised against the PAK4 peptide, RRKSLVGTPYWMAPE (**residues 2-16 of SEQ ID NO: 1**), which comprises a phosphorylated serine. In another embodiment, that is applicable to methods of the present invention the level of total PAK4 protein is determined using a PAK4-specific antibody. In a preferred embodiment, the PAK4-specific antibody is raised against the peptide sequence, ATTARGGPGKAGSRGRFAGHSEA (**SEQ ID NO: 2**).

Please delete paragraph [0045] on pages 12-13, and replace it with the following paragraph:

[0003] According to the present invention, phosphorylated PAK, especially phosphorylated PAK4, and total PAK4 protein, can be detected using antibodies that recognize the phosphorylated form of PAK4 and the PAK4 protein in general. The present invention provides a method, then, for determining the level of phosphorylated PAK in a mammalian test biopsy by exposing the test biopsy to, for instance, a phosphospecific antibody specific for PAK. The antibody can be labelled so that it is easily detectable. Thus, the amount of antibody that binds to phosphorylated PAK4 in a sample, correlates with the level of phosphorylated PAK in the test biopsy. Such a phosphospecific antibody can be designed to the phosphorylated serine-474 of the PAK4 protein. For instance, an antibody can be raised against the PAK4 peptide sequence, RRK**SLVG**TPYWMAPE (**residues 2-16** of SEQ ID NO. 1), wherein the serine-474 comprises a phosphate moiety (bold, underlined). Antibodies raised to other peptide sequences that comprise the phosphorylated serine-474 are also contemplated by the present invention.

Please delete paragraph [0052] on page 15, and replace it with the following paragraph:

[0004] Rabbit polyclonal antibodies against total PAK4 protein (#933) were raised against peptide ATTARGGPGKAGSRGRFAGHSEA (SEQ ID NO. 2), which represents amino acids 122-144 of the PAK4 protein. Phosphospecific anti-PAK4 polyclonal rabbit antibody #108 was raised against the KLH conjugated phospho-peptide synthesized with Ser-474 phosphorylated (CRRKpSLVGTPYWMAPE) (SEQ ID NO. 1). The sequence, RRKSLVGTPYWMAPE, **residues 2-16** of SEQ ID NO. 1 spans the region 371-385 of the PAK4 protein sequence. The phosphospecific PAK4 polyclonal #108 sera was further purified on a protein A affinity column. The specificity of the protein A purified sera for phosphorylated PAK4 was confirmed by testing against antigen peptides

CRRK_pSLVGTPYWMAPE (SEQ ID NO. 1), the non-phosphorylated CRRKSLVGTPYWMAPE (SEQ ID NO. 3) (*i.e.*, peptide “#704”) and phosphorylated Thr-478 (CRRKSLVG_pTPYWMAPE) (SEQ ID NO. 4) (*i.e.*, peptide “#681”) versions of the PAK4 peptide to confirm specificity to the phosphorylated serine 474. Any antibodies that were found to cross-react with the non-phosphorylated peptide were removed by passing the protein A purified sera through peptide #681 coupled to Ultralink-Iodoacetyl column (Pierce, USA).